

<b>I. REAL PARTY IN INTEREST .....</b>	<b>2</b>
<b>II. RELATED APPEALS AND INTERFERENCES .....</b>	<b>2</b>
<b>III. STATUS OF CLAIMS.....</b>	<b>3</b>
<b>IV. STATUS OF AMENDMENTS .....</b>	<b>3</b>
<b>V. SUMMARY OF CLAIMED SUBJECT MATTER.....</b>	<b>3</b>
<b>VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.....</b>	<b>4</b>
<b>VII. ARGUMENT.....</b>	<b>4</b>
<b>VIII. CLAIMS APPENDIX .....</b>	<b>10</b>
<b>IX. EVIDENCE APPENDIX .....</b>	<b>15</b>
<b>X. RELATED PROCEEDINGS APPENDIX .....</b>	<b>16</b>

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	:	Customer Number: 46320
	:	
Simon HOLDSWORTH.	:	Confirmation Number: 6280
	:	
Application No.: 10/016,935	:	Group Art Unit: 2143
	:	
Filed: December 14, 2001	:	Examiner: J. Avellino
	:	
For: SELECTION OF COMMUNICATION STRATEGIES FOR MESSAGE BROKERS OR PUBLISH/SUBSCRIBE COMMUNICATIONS		

**TRANSMITTAL OF APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith is Appellant's Appeal Brief in support of the Notice of Appeal filed February 28, 2006, and in response to the Notice of Non-Compliant Appeal Brief dated July 17, 2006.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. §§ 1.17, 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: August 11, 2006

Respectfully submitted,

/s/ Scott D. Paul  
Scott D. Paul  
Registration No. 42,984  
Steven M. Greenberg  
Registration No. 44,725  
CUSTOMER NUMBER 46320

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	:	Customer Number: 46320
	:	
Simon HOLDSWORTH.	:	Confirmation Number: 6280
	:	
Application No.: 10/016,935	:	Group Art Unit: 2143
	:	
Filed: December 14, 2001	:	Examiner: J. Avellino
	:	
For:		SELECTION OF COMMUNICATION STRATEGIES FOR MESSAGE BROKERS OR PUBLISH/SUBSCRIBE COMMUNICATIONS

**APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed February 28, 2006, and in response to the Notice of Non-Compliant Appeal Brief dated July 17, 2006, wherein Appellant appeals from the Examiner's rejection of claims 1-14 and 16.

**I. REAL PARTY IN INTEREST**

This application is assigned to IBM Corporation by assignment recorded on December 14, 2001, at Reel 012393, Frame 0720.

**II. RELATED APPEALS AND INTERFERENCES**

Appellant is unaware of any related appeals and interferences.

### **III. STATUS OF CLAIMS**

Claims 1-14 and 16 are pending in this Application and have been three-times rejected. It is from the multiple rejections of claims 1-14 and 16 that this Appeal is taken.

### **IV. STATUS OF AMENDMENTS**

The claims have not been amended subsequent to the imposition of the Office Action dated December 14, 2005.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claims 1, 11, 14, 15 and 16 are respectively directed to a message brokering system, a data processing system, computer program product for providing a publish/subscribe brokering serve for publisher and subscriber application programs, a method of communication in a publish/subscribe environment in which publisher application programs send messages to subscriber application programs via message brokers, and a method of configuring a message brokering system for efficient inter-broker communications in a multi-broker publish/subscribe environment in which publishers publish messages via message brokers and subscribers register with message brokers to receive published messages.

In accordance with the Appellant's invention, published messages can be received from one or more publisher application programs and the messages can be forwarded to connected message brokering systems for ultimate delivery to local subscribers of the respective message brokering systems. (Figure 1 and page 19, lines 21-26) In response to determining a particular communication characteristic of an inter-broker communication link between connected ones of the message brokering systems, a message filtering policy for the connective ones of the message

brokering system can be selected which is appropriate for the communication characteristic. (Page 22, lines 15-29, and page 29, lines 9-14). Thereafter, the forwarding of the messages between the message brokering systems via the inter-broker communication link can be filtered or unfiltered according to the selected message filtering policy. (Page 22, lines 15-29).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 1-4, 10-14, and 16 were rejected under 35 U.S.C. § 103 for obviousness based Owens et al., U.S. Patent No. 6,633,630 (hereinafter Owes), in view of Narasimhan et al., U.S. Patent No. 6,073,165 (hereinafter Narasimhan);

2. Claims 5 and 6 were rejected under 35 U.S.C. § 103 for obviousness based Owens in view of Narasimhan and further in view of Hurst et al., U.S. Patent No. 6,131,123 (hereinafter Hurst), and Khan et al., U.S. Patent Publication No. 2002/0143951 (hereinafter Khan);

3. Claim 7 was rejected under 35 U.S.C. § 103 for obviousness based Owens in view of Narasimhan and further in view of Delaney et al., U.S. Patent Publication No. 2001/0027479 (hereinafter Delaney); and

4. Claims 8 and 9 were rejected under 35 U.S.C. § 103 for obviousness based Owens in view of Narasimhan, Delaney, and Kahn.

## **VII. ARGUMENT**

### **THE REJECTION OF CLAIMS 1-4, 10-14, AND 16 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED UPON OWENS IN VIEW OF NARASIMHAN**

For convenience of the Honorable Board in addressing the rejections, claims 4, 10-14, and 16 stand or fall together with independent claim 1; claim 2 stands or falls alone; and claim 3 stands or falls alone.

The statement of the rejection for each of the claims in the Third Office Action dated December 14, 2005 appears to be identical to the statement of the rejection in the Second Office Action dated August 8, 2005, despite different Examiners examining the application. As such, Appellant will proceed by referring to Appellant's arguments found in the Second Amendment dated October 13, 2006, then addressing any response to these arguments by the Examiner in the Response to Arguments section found on pages 13-15 of the Third Office Action.

Owens does not teach the claimed means for selecting a message filtering policy which is appropriate for a communication characteristic

On pages 8 and 9 of the Second Amendment, Appellant argued that Owens fails to teach or suggest the claimed "communication characteristic." The Examiner responded to this argument on page 13 by asserting:

Owens does disclose selecting a filter appropriate for a communication chrematistic [sic], although no specifically the claimed one, it still utilizes communication characteristics.

Notwithstanding this assertion, the Examiner has still failed to specifically identify within Owens a teaching can be found that supports the Examiner's allegations that Owens discloses selecting a filter appropriate for a communication characteristic. The Examiner's assertions are conclusory statements without factual support.

Narasimhan's **rerouting** based upon a communication characteristic is not comparable to the claimed selecting a message filtering policy appropriate for a communication characteristic

On page 10 of the Second Amendment, Appellant argued that Narasimhan merely teaches rerouting based upon a communication characteristic (e.g., a server has failed), but this characteristic is completely unrelated to message filtering. The Examiner responded to this

argument on page 14 of the third Office Action, in which the Examiner cited case law and asserted:

Furthermore, it is in the combination of Narasimhan and Owens that the limitation would be met, the motivation above provides ample discussion as to how the system of Owens would benefit from the inclusion of Narasimhan. By this rationale, the rejection is maintained.

The Examiner's comments, however, do not directly address Appellant's arguments. Appellant has argued that the Examiner is taking a teaching regarding one particular feature in Narasimhan and trying to modify a feature in Owens when these features are unrelated to one another. Specifically, the Examiner is taking a teaching associated with the notion of rerouting a message if a server has failed and tried to apply this teaching to Owen's teaching of selecting a filtering policy. The Examiner's has failed to establish a reasonable basis for why one having ordinary skill in the art would modify Owens in view of Narasimhan in the manner suggested by the Examiner, and the Examiner's assertion that "the motivation above provides ample discussion" (presumably referring to the paragraph spanning pages 4 and 5 of the Third Office Action) does not clarify the issue.

Owens does not teach *automatically* selecting filtering policies

On page 11 of the Second Amendment, Appellant argued that the citation referred to by the Examiner (i.e., column 8, lines 29-31) does not teach automatically selecting filtering policies. This argument was in response to the Examiner's assertion that "Owens motivated the exploration of the art of automatically selecting filtering policies" in the Second Office Action. This same assertion is found on page 4 of the Third Office Action. The Examiner responds to this argument on page 14 of the Third Office Action by noting that "automatically selecting filtering policies" is not recited in the claims. Regardless of whether or not the claims explicitly recite automatically selecting filtering policies, the Examiner is improperly making a factual

determination as to a motivation, and Appellant's arguments are directed to pointing out these factual misstatements within the Examiner's statement of the rejection.

Proposed combination would not result in claimed invention

On pages 11-13 of the Second Amendment, Appellant argued that even if one having ordinary skill in the art were motivated to modify the references, the claimed invention would not result. The Examiner's complete response to these arguments are found in the paragraph spanning pages 14 and 15 of the Third Office Action, and are reproduced, in their entirety, below:

As to point (4) the Office respectfully disagrees. Both references in question discuss message filtering techniques and routing messages to the intended recipients. As such there is no way that the combination of the two references would result in anything but message filtering techniques. By this rationale, the rejection is maintained.

Again, the Examiner's comments do not directly address Appellant's arguments. Appellant has not argued that the combination of references would not result in a teaching of message filtering techniques. Instead, Appellant has argued that the Examiner's combination of references would not result in the specific limitations recited in the claims.

Additional arguments

On pages 13 and 14 of the Second Amendment, Appellant noted that claims 1, 11, and 14 had been amended to specifically distinguish the claimed invention over the applied prior art. Furthermore, Appellant argued that the proposed modification would impermissibly change the principle of operations of Owens. The Examiner, however, did not address any of these arguments in the Third Office Action.



Claim 2

On pages 14 and 15 of the Second Amendment, Appellant separately argued that claim 2 further distinguishes the claimed invention over the applied prior art. The Examiner, however, did not address any of these arguments in the Third Office Action.

Claim 3

On page 15 of the Second Amendment, Appellant separately argued that the Examiner did not specifically identify, within the applied art, the teachings allegedly disclosing the claimed features recited in claim 3. The Examiner, however, did not address any of these arguments in the Third Office Action.

**THE REJECTION OF CLAIMS 5 AND 6 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED UPON OWENS IN VIEW OF NARASIMHAN, HURST, AND KHAN**

For convenience of the Honorable Board in addressing the rejections, claims 5 and 6 stand or fall together with independent claim 1. Appellant incorporates herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. § 103 for obviousness based upon Owens in view of Narasimhan. The additional references to Hurst and Khan do not cure the argued deficiencies of Owens and Narasimhan. Accordingly, the proposed combination of references would not yield the claimed invention

**THE REJECTION OF CLAIM 7 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED UPON OWENS IN VIEW OF NARASIMHAN AND DELANEY**

For convenience of the Honorable Board in addressing the rejections, claim 7 stands or falls together with independent claim 1. Appellant incorporates herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. § 103 for obviousness

based upon Owens in view of Narasimhan. The additional reference to Delaney does not cure the argued deficiencies of Owens and Narasimhan. Accordingly, the proposed combination of references would not yield the claimed invention.

**THE REJECTION OF CLAIMS 8 AND 9 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED  
UPON OWENS IN VIEW OF NARASIMHAN, DELANEY, AND KHAN**

For convenience of the Honorable Board in addressing the rejections, claims 8 and 9 stand or fall together with independent claim 1. Appellant incorporates herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. § 103 for obviousness based upon Owens in view of Narasimhan. The additional references to Delaney and Khan do not cure the argued deficiencies of Owens and Narasimhan. Accordingly, the proposed combination of references would not yield the claimed invention

**Conclusion**

Based upon the foregoing, Appellant respectfully submit that the Examiner's rejections under 35 U.S.C. § 103 for obviousness based upon the applied prior art are not viable. Appellants, therefore, respectfully solicit the Honorable Board to reverse the Examiner's rejections under 35 U.S.C. § 103.

Date: August 11, 2006

Respectfully submitted,

/s/ Scott D. Paul

Scott D. Paul

Registration No. 42,984

Steven M. Greenberg

Registration No. 44,725

CUSTOMER NUMBER 46320

## **VIII. CLAIMS APPENDIX**

1. A message brokering system for providing a publish/subscribe service for publisher and subscriber application programs, comprising:

means for receiving published messages from one or more publisher application programs;

means for forwarding received messages to connected message brokering systems;

means, responsive to a communication characteristic of an inter-broker communication link between the message brokering system and one of said connected message brokering systems, for selecting a message filtering policy which is appropriate for the communication characteristic; and

means for controlling the forwarding of messages via the inter-broker communication link using the selected message filtering policy, wherein

the means for selecting a message filter policy is separate from the publisher and subscriber application programs.

2. A message brokering system according to claim 1, wherein the communication characteristic used to select a message filtering policy is a communication protocol provided by the communication link.

3. A message brokering system according to claim 1, wherein establishing an inter-broker communication link includes:

defining the communication characteristic for the link;

comparing the communication characteristic with a list of administrator-defined associations between communication characteristics and message filtering policies, to select a message filtering policy for the communication link; and

storing an identification of the selected message filtering policy in association with the communication link.

4. A message brokering system according to claim 1, wherein the communication characteristic used to select a message filtering policy includes a dynamic communication characteristic.

5. A message brokering system according to claim 4, wherein the communication characteristic used to select a message filtering policy includes a measure of subscription activity.

6. A message brokering system according to claim 4, wherein the communication characteristic used to select a message filtering policy includes a measure of redundant message transmissions.

7. A message brokering system according to claim 1, wherein the means for controlling includes means for implementing a broadcast messaging policy and means for implementing a proxy-subscription-based message filtering policy, a respective one of said means for implementing being activated in response to said selection of a message filtering policy.

8. A message brokering system according to claim 7, wherein said means for implementing a proxy-subscription-based messaging policy comprises:

means for receiving subscription information for connected message brokering systems and for storing said subscription information for comparison with received published messages;

means for forwarding to connected message brokering systems subscription information for subscriber application programs connected to the message brokering system.

9. A message brokering system according to claim 7, wherein the broadcast messaging policy is implemented for links which provide a non-transactional messaging protocol and the proxy-subscription-based message filtering policy is implemented for links which provide a transactional messaging protocol.

10. A message brokering system according to claim 1, wherein the selection of a message filtering policy is specific to a selected message topic or topic group.

11. A data processing system comprising:

at least a first and a second message broker, connected via one or more inter-broker communication links and configured to provide a publish/subscribe service for publisher and subscriber application programs;

means, responsive to a communication characteristic of a communication link between the first and second message brokers, for selecting a message filtering policy which is appropriate for the communication characteristic; and

means for controlling the transmission of messages via the inter-broker communication link using the selected message filtering policy, wherein

the means for selecting a message filter policy is separate from the publisher and subscriber application programs.

12. A data processing system according to claim 11, wherein said means for selecting a message filtering policy is adapted to select one of a plurality of different policies in response to characteristics of a received message.

13. A data processing system according to claim 12, wherein the means for selecting a message filtering policy is adapted to select one of a plurality of different policies in response to a topic identifier within a received message.

14. A computer program product for providing a publish/subscribe brokering service for publisher and subscriber application programs, comprising program code recorded on a machine-readable recording medium, the program code comprising:

means for receiving published messages from one or more publisher application programs;

means for forwarding received messages to connected message brokering systems;

means, responsive to a communication characteristic of an inter-broker communication link between the message brokering system and one of said connected message brokering systems, for selecting a message filtering policy which is appropriate for the communication characteristic; and

means for controlling the forwarding of messages via the inter-broker communication link using the selected message filtering policy, wherein

the means for selecting a message filter policy is separate from the publisher and subscriber application programs.

Claim 15 (Cancelled)

16. A method of configuring a message brokering system for efficient inter-broker communications in a multi-broker publish/subscribe environment in which publishers publish messages via message brokers and subscribers register with message brokers to receive published messages, the method comprising:

responsive to a communication characteristic for a communication link between the message brokering system and another message brokering system, selecting a message filtering policy according to the determined communication characteristic; and

controlling the transmission of messages via the communication link using the selected message filtering policy.

**IX. EVIDENCE APPENDIX**

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellant in this Appeal, and thus no evidence is attached hereto.



**X. RELATED PROCEEDINGS APPENDIX**

Since Appellant is unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.